

Evaluation Outcome Update
Community-Alternative to Psychiatric Residential Treatment Facilities
Indiana Intensive Youth Services

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Introduction

On September 30, 2012, Indiana and eight other states completed a five year Medicaid grant to demonstrate that intensive community based services can be effective for youth complex behavioral health. These are youth who might otherwise be treated in a psychiatric residential treatment facility (PRTF). This interim report reviewed findings from Indiana between January, 1 2008 and June 30, 2011. In addition to usual Medicaid clinical and rehabilitation services, grant services were coordinated using the wraparound process (Suter & Bruns, 2009). Non-traditional grant services included: habilitation (skill development), clinical consultation, family training and support, respite, flex funds and non-medical transportation. The Deficit Budget Act grant was to determine the cost effectiveness of home and community based services as an alternative to using a PRTF. This analysis specifically examined under what circumstances youth and families benefit from intensive community based services.

Population

During the first three and half years of the grant, 1003 youth and families received grant services. By definition, youth had intensive behavioral health needs and might otherwise be served in a PRTF. Eligibility for the grant was also limited by age (6 to 21)

and income (less than or equal to 150% of the federal poverty level). Only youth for whom grant Medicaid claims had been paid (if in services for more than 12 months) and for whom outcome and wraparound fidelity information was available were included in the study. These criteria reduced the sample to 790, including a smaller subset of 453 youth and families who had completed an episode of grant services. The mean age of youth was 12.09 (median age = 12.00, range = 6 – 18). More boys than girls (71.8%) were involved in grant services. The youth identified themselves as 74.2% Caucasian, 20% African American, 4.7% multiracial, and 4% Hispanic.

Methodology

Measures

Outcome Measure. The Child and Adolescent Needs and Strengths (CANS, Lyons, 2009) was used to measure change between the youth and caregivers strengths and needs at the beginning of treatment and two other points in time (end of episode of care and/or last assessment before June 30, 2011). The CANS consists of six dimensions (life functioning, behavioral health symptoms, risk behaviors, youth strengths, caregiver strengths and needs, and acculturation). Each dimension includes multiple items, which are rated on a four-point scale (0, 1, 2, and 3). CANS assessments were completed by trained and certified practitioners when services began, every six months and at the end of treatment. The CANS has been found to be reliable and valid (Lyons, 2009). Demonstrated item level validity for the CANS supports the use of individual items in data analysis (Anderson, Lyons, Giles, Price & Estes, 2003). The CANS has demonstrated strong reliability and validity in mental health, child welfare, and juvenile justice (Leon, Ragsdale, Miller, & Spacarelli, 2008; Lyons & Weiner, 2009; Sieracki, Leon, Miller, & Lyons, 2008).

Dimensions were converted into domains by multiplying the mean of dimension items by 10, creating a 30 point scale. For state performance measures, reliable change indices (RCI, Wise, 2004) for each domain had been calculated; the same RCIs are used in this study (Effland, Walton, & McIntyre, 2011). Improvement in a domain is defined as change greater than the domain's RCI.

Wraparound Fidelity Index (WFI-4, Bruns et al., 2007). The Washington University Wraparound Evaluation and Research Team (WERT, Bruns et al., 2010) has developed an index to measure adherence to the wraparound process. Ten basic principles or elements of wraparound are carried out in four phases through specified activities. The ten wraparound elements are: Family Voice and Choice, Team Based, Natural Supports, Collaboration, Community Based, Culturally Competent, Individualized, Strengths Based, Persistence, and Outcome Based (Bruns et al, 2004). Evidence is building; adherence to the wraparound model principles, phase, and activities is related to better outcomes (Effland et al., 2011; Suter & Bruns, 2009).

As part of the grant's evaluation and quality improvement processes, fidelity to the practice model was measured through telephone surveys with wraparound facilitators, caregivers, and youth who received services. Surveys were completed three to six months after services began, annually, and at the end of treatment. Trained and certified surveyors interviewed participants and rated the WFI-4. The WFI-4 has been demonstrated to be reliable and valid (Bruns, Burchard, Suter, Leverentz-Brady, & Force, 2004; Bruns et al. 2007). Levels of fidelity to wraparound have been categorized as high, adequate, borderline or low (Bruns, Leverentz-Brady, K. M., & Suter, 2005).

Evaluation /research evaluation questions. As intensive community based services mature across the state, how closely is the practice model being followed? In this study, how is fidelity related to outcomes?

Analysis. The chi-square (χ^2) statistic was used to determine if the percentage of reliable improvement differs significantly when services to youth are coordinated with high fidelity to the wraparound care coordination process compared to adequate, borderline and low levels of adherence to the wraparound process model. Analyses were run for all 453 youth who had completed an episode of intensive community based services and for 780 youth who had completed an episode of services or continued in services in June 2011.

Findings

High fidelity to wraparound is significantly related to reliable improvement in any domain and to reliable improvement in each of the following domains (Behavioral Health Symptoms, Risk Behaviors, Life Functioning, Youth Strengths, and Caregiver Strengths and Needs). Figure 1 displays the positive association between the level of adherence to the wraparound process and reliable improvement in any domain. Table 1 details the relationships between fidelity and improvement in all outcome domains. Reliable Improvement in Any Domain occurs for 78% of youth who completed services, which were coordinated with high fidelity to the wraparound process $\chi^2 (3) = 14.271, p < .001$. Similarly, at the end of grant services for youth receiving high fidelity wraparound services, symptoms improved for 47% $\chi^2 (3) = 8.894, p < .01$; risks decreased for 53% $\chi^2 (3) = 14.462, p < .01$; life functioning improved for 59% $\chi^2 (3) = 23.822, p < .001$; strengths increased for 46% $\chi^2 (3) = 19.517, p < .001$; and 39% of caregivers improved $\chi^2 (3) = 12.823, p < .01$. When wraparound is provided at lower levels of fidelity, improvements are significantly lower. For example, reliable improvement in any domain drops from 78% to 56-57%, similar to levels achieved in usual public mental health services statewide.

When youth in active services are combined with those who had completed services, the percentages of reliable improvement dropped, but remained higher for youth and caregivers receiving high fidelity wraparound services, and for youth in usual services. Table 2 provides details. Reliable Improvement in Any Domain for 65% of youth ($\chi^2(3) = 14.271, p < .01$) compares favorably with lower levels of fidelity ranging from 51 - 58% improvement, similar to outcomes for usual services. For each CANS domain, except risks, significantly greater improvement is associated with high fidelity to the practice model.

Discussion

Since the beginning of the grant, interim analyses have found a consistent positive, significant relationship between improvement for youth and caregivers and fidelity to the model of practice. Consistent with findings for other practice models, variability in fidelity levels made it possible to evaluate the importance of adherence to the wraparound process. Monitoring practice fidelity, participant satisfaction, outcomes, and using information are part of the quality improvement processes for youth services. Active quality improvement efforts to improve services is reflected; 43% of youth completing grant services experienced high fidelity services; for ongoing plus completed services, 45% were provided with high fidelity.

Limitations of the study included using a convenience sample for the evaluation without a sizable comparison group of similar youth who receive only usual behavioral health services. The promising trends describe the experiences on targeted youth receiving intensive community services across Indiana, but generalizations are limited by the design of the study and available information.

Next Steps

After data from the fifth year is collected and analyzed, an update will be provided. Additionally, continuing to collect wraparound fidelity and satisfaction data from youth and families will continue as part of the quality improvement sustainability plan for intensive youth services. Collecting outcome data will also continue as part of usual and intensive services. Remaining questions include: Has as the implementation of training and certification of Indiana wraparound facilitators through the Innovations Institute (University of Maryland) resulted in higher levels of fidelity and better outcomes for youth and families? Would youth with complex needs, including trauma or other behavioral health symptoms for whom evidence based practices exist, have even better outcomes with the addition of effective evidence based treatment? Improving the evaluation model may also address limitations in generalizing from the current study.

Figure 1.

Cross Tabs: Number of Youth with Reliable Improvement in Any CANS Domain X Level of Wraparound Fidelity for Youth Completing an Episode of Intensive Community Services, n = 453

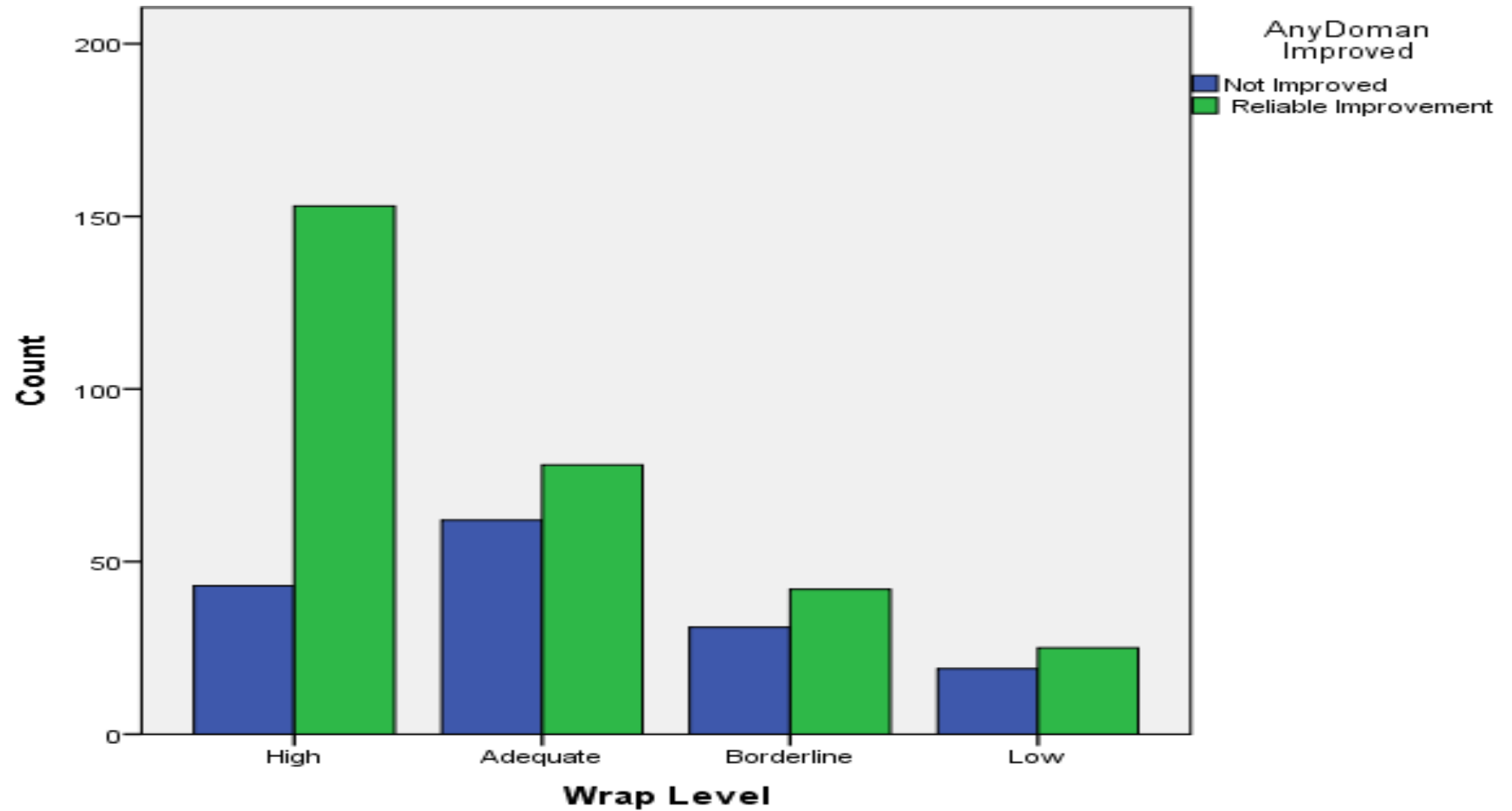


Table 1.

Percentage Reliable Improvement for Youth Completing an Episode of Intensive Treatment and Support January 2008 - June 30, 2011

Level of Wraparound Fidelity (WFI-4 Total Combined Score)	% Reliable Improvement in Any CANS Domain	% Reliable Improvement in Behavioral Health Symptoms	% Reliable Improvement in Risk Behaviors	% Reliable Improvement In Life Functioning	% Reliable Improvement in Youth Strengths	% Reliable Improvement in Caregiver Strengths & Needs
1 High (196)	78***	47**	53**	59***	46***	39**
2 Adequate (140)	56	29	36	35	29	21
3 Borderline (73)	57	27	8	38	26	27
4 Low (44)	57	29	32	36	20	34
Total (n = 453)	66	37	43	42	35	33

** $p < .01$; *** $p < .001$.

Table 2.

Percentage Reliable Improvement for Youth Receiving Intensive Community Based Treatment and Support January 2008 - June 30, 2011

Level of Wraparound Fidelity (WFI-4 Total Combined Score)	% Reliable Improvement in Any CANS Domain	% Reliable Improvement in Behavioral Health Symptoms	% Reliable Improvement in Risk Behaviors	% Reliable Improvement In Life Functioning	% Reliable Improvement in Youth Strengths	% Reliable Improvement in Caregiver Strengths & Needs
1 High (353)	65**	33*	39	46**	34*	29**
2 Adequate (273)	51	23	30	33	23	18
3 Borderline (109)	53	22	30	32	24	22
4 Low (55)	55	27	29	36	24	33
Total (790)	58	27	34	34	28	25

* $p < .05$; ** $p < .01$.

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